

## DUAL BOTTLE CLOSURE

### Background of the Invention

The present invention is directed toward bottle closures and more particularly, toward a dual closure which is compact and prevents the contents of the bottle from leaking.

A problem often encountered when shipping bottles which are merely sealed by caps that are screwed onto the bottles is that the contents of the bottles may leak during transit. This leads to even greater problems, for example, the mess of the spill that occurs as a result of the leak, as well as damage to the bottles and possible contamination of the contents of the bottles, both of which may cause the product to become unacceptable to the consumer of the product.

Attempts to solve the leakage problem outlined above include using more than merely a cap to seal the bottle. For example, a plastic seal may be secured to the top opening of the bottle or fitted around the cap and neck of the bottle. The seals secured to the top opening are frequently difficult to remove and the plastic seals around the cap and neck are easily broken thus rendering it ineffective in preventing a leak from the bottle.

Outer plastic seals are also somewhat unsightly. While this may not be a problem with many household products, it would not be acceptable for ceramic or fancy glass bottles intended for fragrances or the like.

U.S. Patent No. 3,826,059 to Novitch discloses a bottle with a septum seal and cap. This closure system prevents liquid radioactive material from leaking from the bottle. However, these closures are not truly a dual closure system in that the closures function independently of each other. That is, the outer cap cannot mate with the screw threads found on the neck of the bottle until the septum seal has been removed. Therefore, leaks may still occur.

Thus, a need exists for a compact dual closure system for a bottle which prevents leaks and particularly for ceramic or glass bottles.

### Summary of the Invention

The present invention is designed to overcome the deficiencies of the prior art discussed above. It is an object of the present invention to provide a compact bottle closure for ceramic or glass bottles which prevents the contents of the bottle from leaking particularly during shipping.

It is another object of the present invention to provide a dual bottle closure which fits compactly on the bottle.

In accordance with the illustrative embodiments demonstrating features and advantages of the present invention, there is provided a dual bottle closure which essentially includes a ceramic bottle with an internal closure in the form of an imperforate crown cap secured to the opening of the bottle as well as an external closure in the form of a ceramic cap with a plastic insert which fits

within the cap. The cap surrounds the crown cap and the plastic insert has threads which screw onto the ceramic threads located on the neck of the bottle.

In a second embodiment of the invention, the internal closure is in the form of a cork that is inserted into the opening at the top of the bottle. The cork and opening are covered by the cap and the screw threads on the interior of the cap insert screws onto the threads of the bottle.

Other objects, features, and advantages of the invention will be readily apparent from the following detailed description of two preferred embodiments thereof taken in conjunction with the drawings.

#### Brief Description of the Drawings

For the purpose of illustrating the invention, there are shown in the accompanying drawings forms which are presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

Figure 1 is a perspective view of a first embodiment of the dual bottle closure of the present invention;

Figure 2 is an exploded view of the first embodiment of the dual bottle closure of the present invention on a bottle;

Figure 3 is bottom perspective view of the outer closure of the present invention;

Figure 4 is a cross-sectional view taken through the line 4-4 of Figure 3;

Figure 5 is a cross-sectional view taken through the line 5-5 of Figure 1, and

Figure 6 is a cross-sectional view of a second embodiment of the present invention.

#### Detailed Description of the Preferred Embodiments

Referring now to the drawings in detail wherein like reference numerals have been used throughout the various figures to designate like elements, there is shown in Figure 1 a dual bottle closure constructed in accordance with the principles of the present invention and designated generally as 10.

The first embodiment of the present invention is shown in Figure 2 and essentially includes a bottle 12 with a neck 14 having outer screw threads 16 located thereon, an opening in the top thereof, and an external closure in the form of an external cap 18 which fits onto the neck 14 of the bottle 12 and substantially covers the opening. Located within the cap 18 is an insert 20 with internal screw threads 22 complimentary to the screw threads 16 of the neck 14 of the bottle 12. (See Figures 2, 3 and 5.) The insert 20 lines the inside of the cap 18 and is secured thereto.

The opening at the top of the bottle 12 is sealed with an internal closure in the form of a crown cap 24 of conventional construction. Although not specifically shown, the crown cap 24 includes an outer metallic member that is crimped onto the bottle and an inner sealing member made of cork or plastic or the like that is held tightly over the bottle opening in order to seal the same. When the cap 18 is placed over the opening which is sealed with the crown cap 24, the crown cap 24 is substantially enclosed or covered within the interior space 26 and the screw threads 22 of the insert 20 may be screwed onto the complimentary screw threads 16 on the neck 14 of the bottle 12. (See Figure 5.)

Preferably, the bottle 12 and cap 18 are made of ceramic, glass or other similar material. The bottle may, of course, be of any shape and size as long as it has a threaded neck 14. The insert 20 is preferably made from a plastic material that can slide easily across the ceramic threads of the bottle without binding. The cap 18 and insert 20 are shaped to fit onto the bottle 12 in a complimentary fashion. Alternatively, the insert need not be present at all. For example, the insert may be used when a specific orientation or alignment of the cap in relation to the bottle is necessary.

The second embodiment 110 of the present invention is shown in Figure 6 and essentially includes a similar bottle 112 with a neck 114 having external screw threads 116 located thereon, an opening, and a cap 118 which fits onto the neck 114 of the bottle and substantially covers the opening. Located within the cap 118 is an insert 120 with internal screw threads 122 that are

complimentary to the screw threads 116 of the neck 114 of the bottle. An internal closure in the form of a cork or similar stopper 124 fits within the opening of the bottle 112 and is substantially enclosed or covered by the cap 118 and the insert 120 when the cap 118 is placed thereon.

As with the first embodiment, in the second embodiment of the invention, the bottle 112 and cap 118 may be made from glass, ceramic, or any other type of material known and used in the art. The bottle 112 and cap 118 may also be of any shape and size. The insert 120 is preferably made from plastic. The cap and plastic insert are shaped to fit onto the bottle in a complimentary fashion. Also, as described in the first embodiment, the insert may be optional.

The invention described above provides two caps for a bottle in a compact manner. One of the purposes served with both of the embodiments described above is to prevent the contents of a decorative bottle from leaking or spilling during shipping. Another purpose of the present invention is to allow the bottle to be resealed after the crown cap or cork has been removed. Furthermore, the caps may be decorative so as to allow the bottles to be used as decorative pieces or collectors' items.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and accordingly, reference should be made to the appended claims rather than to the foregoing specification as indicating the scope of the invention.